

PROJECT COORDINATION

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SECONDO \$

"A Security ECONomics service platform for smart security investments and cyber insurance pricing in the beyonD 2020 netwOrking era"

> **PROJECT DETAILS** Project number: 823997 Project Website: secondo-h2020.eu Project start: 1st January 2019



VISION

Technological inventions and developments have started to become an integral part of a company's lifecycle. However, as well as conferring significant advantages, they bring with them an enhanced risk of cyber incidents - including cybercrime - and a subsequent growth in products and services aimed at combatting the risks.

Driven by market needs, SECONDO therefore proposes a unique, scalable, highly interoperable Economics-of-Security-as-a-Service (ESaaS) platform that encompasses a comprehensive cost-driven methodology for:



Estimating cyber risks based on a quantitative approach that focuses on both technical and nontechnical aspects, that influence cyber exposure;



Determining the residual risks and estimating the cyber insurance premiums considering the insurer's business strategy, while eliminating the information asymmetry between the insured and insurer.



Providing analysis for effective and efficient risk management by recommending optimal investments in cyber security controls;



Cyber Threat Intelligence Platform

Acquire Data Q

- Internal Sources
- External Sources • Open-source
 - intelligence Social media
 - intelligence
 - Human intelligence
 - Dark Web

Continuous Risk X Monitoring

 Assess on a continuous basis the risk levels and the performance of the implemented cyber security controls



Analyze Data 🚺

- Artificial intelligence: make predictions and extract insights and patterns
- Data analytics: analyze raw data to make conclusions
- Machine learning: predict and find representative values for the missing data

Intelligence Q

- Detect threats
- Understand & Evaluate organization's status
- Response and prepare the organization's future actions
 - Mitigate Risk Risk Transfer

The SECONDO Platform

Acquire Data Q

- Phishing
- SIEM
- Log files (Firewall, IDS)
- Social Media
- ELK stack
- Python
- Apache

Continuous Risk X Monitoring

- OLISTIC Enterprise Risk Management
- Blockchain
- Ethereum private blockchain



Analyze Data 🔥 🔥

- Python
- Pandas Library
- ELK stack
- QORAS Method
- Nash Equilibria

Intelligence

- Econometric Methods
- Optimal Decisions
- contracts
- Solidity

Q • Premiums and Coverages • Privacy-preserving smart

The SECONDO Platform



The SECONDO Challenges

- 1. Optimal Risk Assessment
- 2. Smart Contracts
- 3. Cyber Threat Mitigation
- 4. Predict Attacking Scenarios
- 5. Adapt to new changes and needs



- 6. Adjust to organization topology
- 7. Accurate Data
- 8. Continuous Risk Monitoring
- 9. Detect-Prepare-Prevent-Protect
- 10. Reduce cyber security budget

Mission

The SECONDO project aims to design and develop a unique, scalable and highly interoperable Economicsof- Security-as-a-Service platform. SECONDO will support professionals who seek cyber security investments, developed to support human decision making, and a complete well-founded security strategy.

This is a timely research problem, as the rapid growth of cyber-attacks is expected to continue its upwards trajectory. Such growth presents a prominent threat to normal business operations and the EU society itself. The SECONDO platform will establish a new paradigm in risk management for enterprises of various sizes, with respect to the GDPR framework, while it will enable formal and verifiable methodologies for insurers that require estimating premiums.

USE CASES

- Human susceptibility to cybersecurity breaches in IoT-enabled smart home.
- Optimal Patching of Airport Cyber Infrastructures.
- Cyber insurance for an Innovative SME.
- Cyber Risk Transfer in Maritime Industry.





